

Appendix B

Annual Operating Plan

Fire Danger Operating and Preparedness Plan for the Moab Interagency Fire Zone

**Bureau of Land Management
Moab Fire District
(Moab/Price/Monticello Field Offices)**

**USDA Forest Service
Manti-La Sal National Forest**

Utah Forestry, Fire, and State Lands

**National Park Service
Southeast Utah Group**

2005

Table of Content

| | |
|--|---|
| Acronyms | 5 |
| Introduction | 6 |
| Objectives | 6 |
| Roles and Responsibilities | 7 |
| A. Fire Danger Operating and Preparedness Plan | |
| B. Suppression Resources | |
| C. Duty Officer | |
| D. Fire Weather Forecasting | |
| E. NFDRS Outputs and Indices | |
| F. Risk Analysis Information | |
| G. Weather Station Maintenance | |
| H. WIMS Access and Station Catalog Editing | |
| I. Preparedness Level and Dispatch Level Guidelines | |
| J. Preparedness Level and Adjective Fire Danger Notification | |
| K. Public and Industrial Awareness | |
| L. NFDRS and Adjective Fire Danger Break Points | |
| M. Fire Danger Pocket Cards | |
| Fire Danger Rating | 8 |
| A. Rating Systems | |
| 1. Agency Planning Level | |
| 2. Dispatch Level | |
| 3. Interagency Preparedness Level | |
| 4. Adjective Fire Danger | |
| Fire Danger Inventory | 9 |
| A. Fire Danger Rating Areas | |
| 1. Low Elevation | |
| a. Location | |
| b. Fuels | |
| c. Weather | |
| d. Topography | |
| e. Fire Occurrence | |

Fire Danger Inventory (cont.) 9

- 2. High Elevation
 - a. Location
 - b. Fuels
 - c. Weather
 - d. Topography
 - e. Fire Occurrence
- B. FDRA Characteristics Table
- C. Weather Stations
 - 1. Description

Break Points 11

- A. Fire Business
- B. Fire Business Break Point Table
 - 1. North Zone Low Elevation Fire Danger Rating Area
 - 2. North Zone High Elevation Fire Danger Rating Area
 - 3. South Zone Low Elevation Fire Danger Rating Area
 - 4. South Zone High Elevation Fire Danger Rating Area

Planning Levels and Interagency Preparedness Level 14

- A. Planning Level Worksheet Instructions
 - 1. Index Value
 - 2. Action
- B. Dispatch Level Worksheet Instructions
 - 1. Index Value
 - 2. Red Flag Warning
 - 3. Haines Index
 - 4. Run Card
- C. Adjective Fire Danger Rating (AFDR) Break Points
 - 1. AFDR Description
 - 2. AFDR Determination
- D. Planning Level Work Sheets – North Zone
 - 1. High Elevation 5 Day Average
 - 2. Low Elevation 5 Day Average
- E. Planning Level Work Sheets – South Zone
 - 1. High Elevation 5 Day Average
 - 2. Low Elevation 5 Day Average

F. North Zone Dispatch Level Worksheets

1. High Elevation Dispatch Level Worksheet
2. Low Elevation Dispatch Level Worksheet

G. South Zone Dispatch Level Worksheets

1. High Elevation Dispatch Level Worksheet
2. Low Elevation Dispatch Level Worksheet

H. Agency Planning Level Worksheet – High Elevation FDRA

I. Agency Planning Level – Low Elevation FDRA

J. Agency Planning Level Procedures

1. Agency Administrator
2. Fire Management Officer
3. Duty Officer
4. Resource Advisor
5. Engine/Crew Leader
6. Fire Prevention Officer
7. Law Rangers

K. Interagency Preparedness Level Worksheet

L. Interagency Preparedness Level Actions/Procedures

1. MIFC Manager
2. Draw Down Level

Acronyms

| | |
|--------|--|
| ACL | Access Control List (WIMS) |
| AFDR | Adjective Fire Danger Rating |
| AFMO | Assistant Fire Management Officer |
| BI | Burning Index |
| BLM | Bureau of Land Management |
| CEFA | Climate Ecosystem Fire Applications |
| EGBCC | Eastern Great Basin Coordination Center |
| ERC | Energy Release Component |
| FCO | Fire Control Officer |
| FDOP | Fire Danger Operating Plan |
| FMO | Fire Management Officer |
| MIFC | Moab Interagency Fire Center |
| NDVI | Normalized Difference Vegetation Index |
| NFDRS | National Fire Danger Rating System |
| NIFC | National Interagency Fire Center |
| NIFMID | National Integrated Fire Management Information Database |
| NWCG | National Wildfire Coordinating Group |
| NWS | National Weather Service - Salt Lake City and Grand Junction |
| RAWS | Remote Automated Weather Station |
| SFMO | State Fire Management Officer |
| SI | Staffing Index |
| SL | Staffing Level |
| USFS | United States Forest Service (FS) |
| WIMS | Weather Information Management System |
| WRCC | Western Regional Climate Center |

Introduction

Each Agency is required to have a fire Preparedness Plan. The *BLM Standards for Fire and Aviation Operations 2002*, requires Bureau field offices to have a Fire Danger Operating Plan (FDOP) (which includes the Preparedness Plan). Interagency partners are included in this plan.

This plan will help simplify the decision-making process for agency administrators, fire managers, dispatchers, agency cooperators, and firefighters by setting agency planning and dispatch levels using fire business break points (based on past fire history and weather). Adjective fire danger ratings (low, high, etc) will be determined using climatological break points.

This plan addresses fire danger levels and ratings, with an emphasis on information and resource sharing between federal agencies, cooperating state and county agencies, private industry, and the public.

This plan is primarily for the period of June through September.

Objectives

1. Provide a tool for agency administrators, fire managers, dispatchers, agency cooperators, and firefighters to gauge fire danger ratings within the fire suppression areas.
2. Define fire danger rating areas with similar weather, fuels, topography, and fire occurrence within existing dispatch zones.
3. Establish a fire weather-monitoring network made up of Remote Automated Weather Stations (RAWS).
4. Determine fire business and adjective fire danger rating break points using the Weather Information Management System (WIMS), the National Fire Danger Rating System (NFDRS), Fire Family Plus software, and by analyzing historical weather data and fire history.
5. Define roles and responsibilities in order to make fire-planning decisions, manage weather information, provide weather forecasts, and brief fire suppression personnel.
6. Ensure that agency administrators, fire managers, and cooperating agencies, private industry (ranchers, landowners, railroad), and the public are notified of the adjective fire danger rating and local preparedness levels.
7. Make recommendations to personnel outlining specific daily actions to take at each planning level.
8. Develop and distribute fire danger pocket cards to all personnel involved with fire suppression activities.

Roles and Responsibilities

- A. **Fire Danger Operating and Preparedness Plan:** This plan provides a method to calculate the preparedness and dispatch levels and provides guidelines for which actions to take at specific preparedness levels. It will not provide information regarding extenuating factors influencing fire management decisions. The agency managers will approve annual updates to the plan; interim updates can be approved by the FMOs.
- B. **Suppression Resources:** Each agency is responsible for determining needed suppression resources for their agency based on their fire management plan.
- C. **Duty Officer:** For the purposes of this plan, a Duty Officer is defined as the FCO, AFMO, or a designated fire operations specialist of each agency, who provides input and guidance regarding planning and dispatch levels. It is the decision of the Duty Officers to interpret and modify the daily preparedness and dispatch levels as required by factors not addressed by this plan. The Duty Officers will keep the Office Manager updated as needed.
- D. **Fire Weather Forecasting:** Daily fire weather forecasts (including NFDRS indices) are developed by the National Weather Service, and posted on the Internet and in WIMS for the Moab Interagency Fire Center (MIFC) to retrieve.
- E. **NFDRS Outputs and Indices:** The MIFC Manager will ensure that the daily fire weather forecast (including NFDRS indices) is retrieved and that the daily interagency preparedness and dispatch planning levels are determined and distributed or made available.
- F. **Risk Analysis Information:** Each agency will assemble seasonal risk information such as live fuel moisture, 1,000 hour fuel moisture, fuel loading, NFDRS (BI/ERC) trends, NDVI imagery, and other pertinent data..
- G. **Weather Station Maintenance:** The Remote Sensing Laboratory located at the National Interagency Fire Center (NIFC) maintains and calibrates the RAWs on an annual basis for BLM. Local designated FS personnel maintain and calibrate the RAWs for the Forest Service.
- H. **WIMS Access and Station Catalog Editing:** The BLM is listed as the station owner for five RAWs units. The FS maintains three RAWs units. The MIFC Center Manager maintains the WIMS Access Control List (ACL), ensures appropriate editing of the RAWs catalogs for the stations, and timely editing of daily 1300 weather observations.
- I. **Planning and Dispatch Level Guidelines:** The FMO, AFMO, FCO, and MIFC Manager will be responsible for establishing and reviewing the planning and dispatch level guidelines on an annual basis, as a minimum.
- J. **Planning Level and Adjective Fire Danger Notifications:** The MIFC Manager will ensure that all initial agency notifications are based on the planning level procedures and direction provided by the Duty Officers.
- K. **Public and Industrial Awareness:** Awareness and prevention programs will be implemented based on Planning Level Guidelines and direction provided by the Duty Officers.
- L. **NFDRS and Adjective Fire Danger Break Points:** Weather and fire data will be analyzed on an annual basis and each agency will ensure that the break points reflect the most accurate information.
- M. **Fire Danger Pocket Cards:** Each agency will ensure that pocket cards are prepared on an annual basis as a minimum. The cards will be distributed to all local and incoming firefighters as well as overhead. The pocket cards will be posted on the National Wildfire Coordinating Group (NWCG) pocket card web site. The Duty Officers will utilize pockets cards to train and brief suppression personnel.

Fire Danger Rating

The National Fire Danger Rating System (NFDRS) utilizes the WIMS processor to manipulate weather data and forecasts stored in the NIFMID database to produce fire danger ratings within a pre-determined Fire Danger Rating Area (FDRA). The system is designed to calculate worst-case scenario fire danger. NFDRS will be utilized in four ways for the purposes of this plan. The first is to compute an **Agency Planning Level**, which will help agency personnel determine an appropriate state of readiness of suppression forces. The **Dispatch Level** is a decision tool for dispatchers to utilize when assigning initial attack resources to new fire starts. The **Interagency Preparedness Level** is a derivative of the Agency Planning level and it used by dispatch to determine its staffing levels and for determining the interagency support available for out of area fires. The fourth utilization of NFDRS is to compute the **Adjective Fire Danger** rating for the purpose of communicating fire danger to public and industrial interests.

Although publicizing fire danger ratings will not prevent all human-caused fires, a strong effort should be made to communicate the fire danger as it changes throughout the fire season. The social, political, and financial impacts of wildfires on agency, public, and industrial entities can be far reaching. Loss of life, property, and financial resources can potentially be associated with any wildfire. As the fire danger fluctuates, agency personnel need to have pre-planned responses. These actions should not only focus on fire suppression, but also on fire prevention.

A. Rating Systems

1. **Agency Planning Level:** Planning levels are based on BIs for BLM, NPS, and State (Low elevation) and ERCs for FS (High elevation). The daily indices from WIMS will be combined into a five-day average to prevent “spiking” of the level. A five level Agency Planning Level Chart determines the readiness level. The break points for the planning level are set using a historical analysis from Fire Family Plus, of fire business and its relationship to 1300 RAWs observations entered into the NIFMID database and processed by WIMS, which calculates the staffing index values (BI, ERC, etc). The Agency Planning Level is used to determine the overall preparedness of the unit. Several procedures and guidelines are to be followed once the planning level has been determined. The Agency Planning level will be used in the morning situation report for each agency.
2. **Dispatch Level:** This level, in addition to the use of agency run cards, guides dispatchers when assigning resources to initial attack fire responses. Dispatch levels are based on BIs for Low Elevation Fire Danger Areas and ERCs for High Elevation Fire Danger Areas, with modifiers for Haines index and Red Flag Warnings. Three dispatch levels are determined; low, moderate, high. The break points for the dispatch level are set using a historical analysis from Fire Family Plus of fire business and its relationship to 1300 RAWs observations entered into the NIFMID database and processed by WIMS, which calculates the staffing index values (BI, ERC, etc).
3. **Interagency Preparedness Level:** The preparedness level is a five tier (1-5) fire danger rating system based on agency planning levels and fire business indicators. The fire business indicators used to calculate the preparedness level are large/multiple fire activity. A flow chart guides personnel through the process. Several procedures and guidelines are to be followed once the Interagency Preparedness Level has been determined. These procedures affect staffing levels of the fire center and items such as draw down levels.
4. **Adjective Fire Danger:** This rating is used by agency personnel to inform public and industrial interests about the fire danger in specific geographical areas (FDRAs). It will be based on the agency planning levels. There are five classes (1-5) that correspond to low, moderate, high, very high, and extreme levels of adjective fire danger.

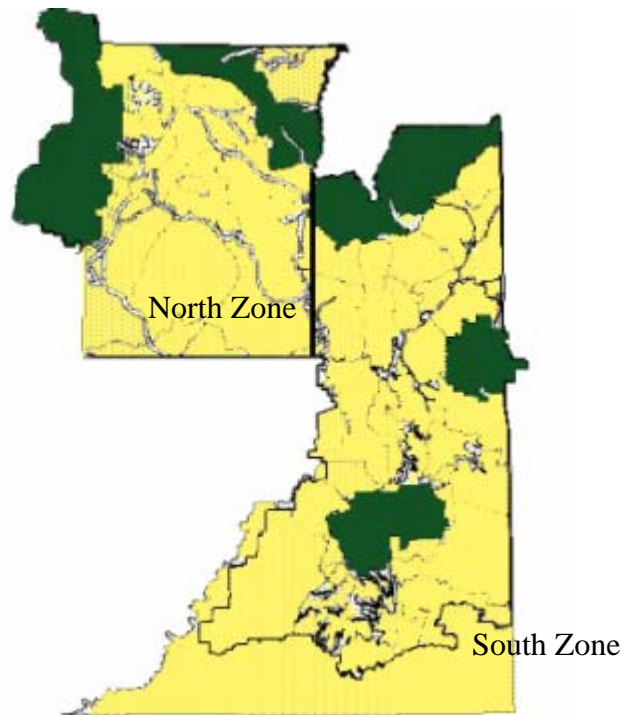
Fire Danger Inventory

A. Fire Danger Rating Areas

Two Fire Danger Rating Areas (FDRAs) have been defined as North Zone and South Zone, using the 110 degree longitudinal line as demarcation. The Zones are further divided into Low and High elevations, the division between them being the 7500-foot elevation mark. The areas are defined by their fuel, topography, climate, fire history characteristics, and RAWS station locations.

1. **Low Elevation Location:** The Low Elevation FDRA covers lands located below 7500' in elevation. This area is primarily BLM administered land and scattered tracts of private and state land administered by the counties and State. National Park Service land is also in this area.
 - a. **Fuels:** The Fuels of the Low Elevation FDRA consists of; forbes, perennial grasses, western annual grasses, Salt Desert Shrub, sagebrush, pinyon-juniper, and some mixed conifer. The predominate fuel is Pinyon Pine and Juniper stands. For this reason, Fuel Model "F" has been selected as the primary fuel model and Burning Index (BI) as the NFDRS index to calculate BLM, State, and NPS agency planning levels.
 - b. **Weather:** Hot and dry weather typically dominates the Low Elevation FDRA during fire season. Utah is the second driest state in the nation. The temperatures rise into the 100s, relative humidity drops to the lower teens, and wetting rain events are scarce. Summer weather patterns that affect the area are westerly and south westerly flows. Westerly flows generally bring hot and dry air into the region with little or no precipitation. The main concern is when low pressure systems or upper level disturbances pass through the area with enough energy and moisture to initiate thunderstorm activity and erratic winds. Fire activity may be infrequent, but the potential for large fire growth is usually quite high. South westerly flows typically bring monsoonal moisture into the region. Fire frequency may increase due to additional thunderstorm activity, but large fire growth potential may be lower due to increased moisture.
 - c. **Topography:** The Low Elevation FDRA is a mixture of deserts, mesas, and canyons.
 - d. **Fire Occurrence:** The Low Elevation FDRA has an average of 140 fires per year.
2. **High Elevation Location:** The High Elevation FDRA covers lands above 7500'. It primarily includes U.S. Forest Service administered land, BLM administered land in the Book and Roan cliffs, and scattered tracts of private/state lands administered by the counties and State.
 - a. **Fuels:** The fuels complex of the High Elevation FDRA is similar to that of the Low Elevation FDRA except that the area has a greater concentration of 100 and 1,000 hour time lag fuels, and also contains a greater density of mixed conifer stands. The occurrence of western annual grasses is much lower. The fires of concern typically occur in steep and remote country where access is a problem. Fuel Model H has been selected to represent this area and the Energy Release Component (ERC) will be used as the NFDRS Index to calculate FS agency planning levels.
 - b. **Weather:** The weather trends in the High Elevation FDRA are quite similar to those of the Low Elevation FDRA, with the primary difference being cooler temps by 10-20 degrees.
 - c. **Topography:** The High Elevation FDRA includes the La Sal, Abajo, Manti, Book Cliff, and Roan Cliff mountain ranges. Its drainages are steep and rocky. The remoteness of this area hinders radio and cellular communication.
 - d. **Fire Occurrence:** The High Elevation FDRA has an average of 60 fires per year

Low Elevation Fire Danger Area –
Light colored areas
High Elevation Fire Danger Area –
Dark colored areas



B. FDRA Characteristics Table

NFDRS Fuel Models
Slope Class
Climate Class
Annual Precipitation
Top Elevation
Bottom Elevation
Acres
Green-up Standard
1000 hr starting
Agencies
Large Fires

| Low Elevation (BI) | High Elevation (ERC) |
|----------------------|----------------------|
| A, C, F (Primary), T | H (Primary), T |
| 1 (0-25%) | 3 (41-55%) |
| 1 (Arid) | 2 (Semi-Arid) |
| 6-9 Inches (At RAWS) | 16 Inches (At RAWS) |
| 7500 Feet | 11,000 Feet |
| 4,000 Feet | 7500 Feet |
| 9.3 Million | 1.8 Million |
| April 15 | May 15 |
| 15 | 20 |
| MOD, SEUG, SES | MLF |
| 1000 acres | 50 acres |

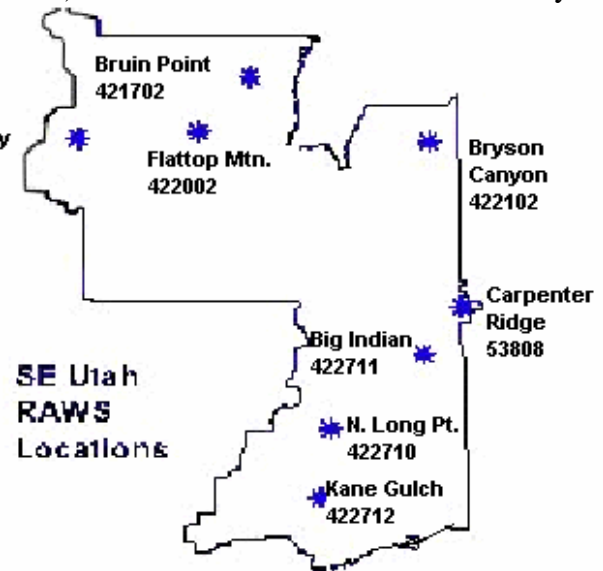
C. Weather Stations

1. Description

The following remote automatic weather stations (RAWS) are located within the area covered by this plan.

| | | |
|---------------|--------|-----------|
| Low Elevation | NWS ID | Elevation |
| Big Indian | 422711 | 6960 |
| Bryson Ridge | 422102 | 5320 |
| Flattop Mtn. | 422002 | 6120 |
| Kane Gulch | 422712 | 6500 |

| | | |
|------------------|--------|-----------|
| High Elevation | NWS ID | Elevation |
| Joe's Valley | 421602 | 8480 |
| North Long Point | 422710 | 8620 |
| Bruin Point | 421702 | 9700 |
| Carpenter Ridge | 053808 | 8180 |



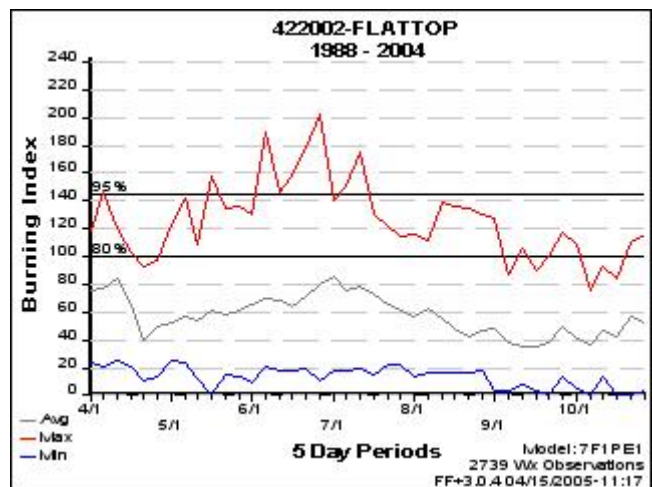
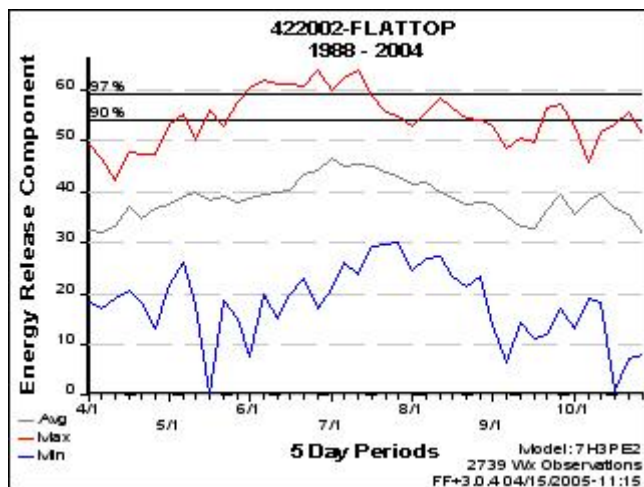
Break Points

A. Fire Business

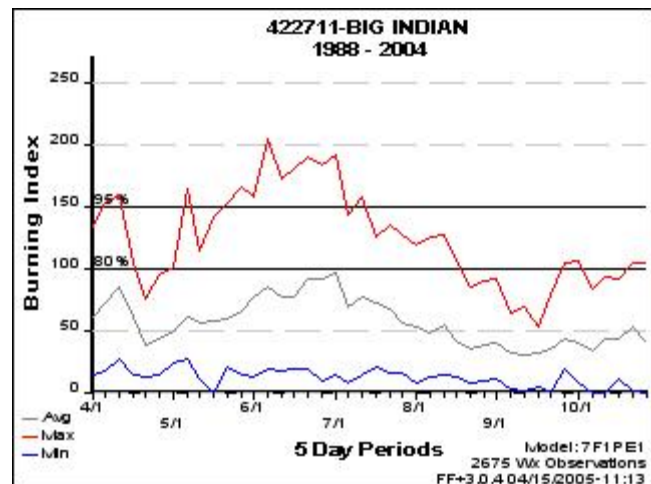
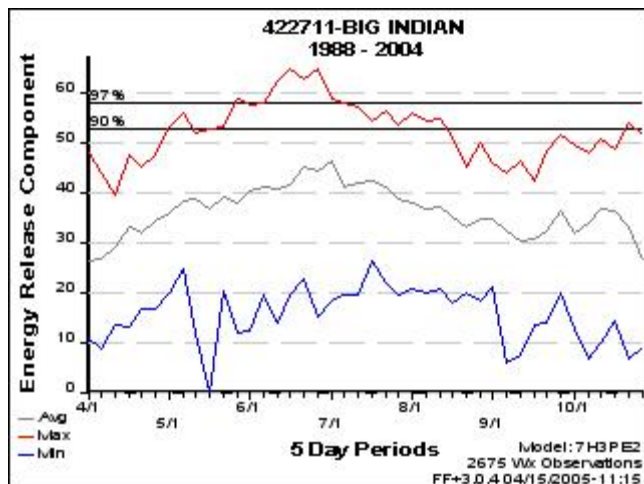
In order to define dispatch-planning levels, fire business break points need to be set. A break point is a threshold at which an index such as the Burning Index (BI) or a component such as the Energy Release Component (ERC) correlates to a change in historical fire activity. Dispatch planning levels differ from adjective fire danger ratings because they take fire history and weather data into account.

The Fire Family Plus software package is used to establish the fire business break points. A statistical analysis based on historical weather and fire activity determines the appropriate index and associated break points for each of the FDRAs. The Flattop Mountain RAWS is used to represent North Zone conditions and the Big Indian RAWS is used to represent South Zone conditions.

North Zone Climatology



South Zone Climatology



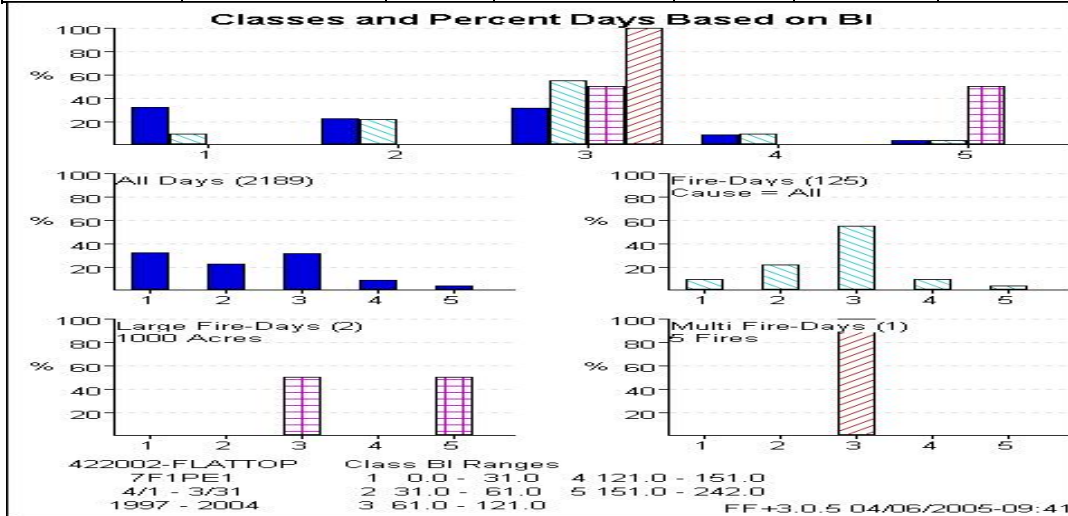
B. Fire Business Break Point Tables

1. North Zone Low Elevation Fire Danger Rating Area Fire Family Plus Analysis

Factors and Determinations

*APL = Agency Planning Level

| Rating Area | RAWS | Start Year | Weighting Factor | Fuel Model | Staffing Index | Fire Business Break point Ranges | |
|---------------|---------|------------|------------------|------------|----------------|----------------------------------|---------|
| Low Elevation | Flattop | 1997 | 1 | F | BI | APL 1 | 0-30 |
| | | | | | | APL 2 | 31-60 |
| | | | | | | APL 3 | 61-120 |
| | | | | | | APL 4 | 121-150 |
| | | | | | | APL 5 | 151+ |

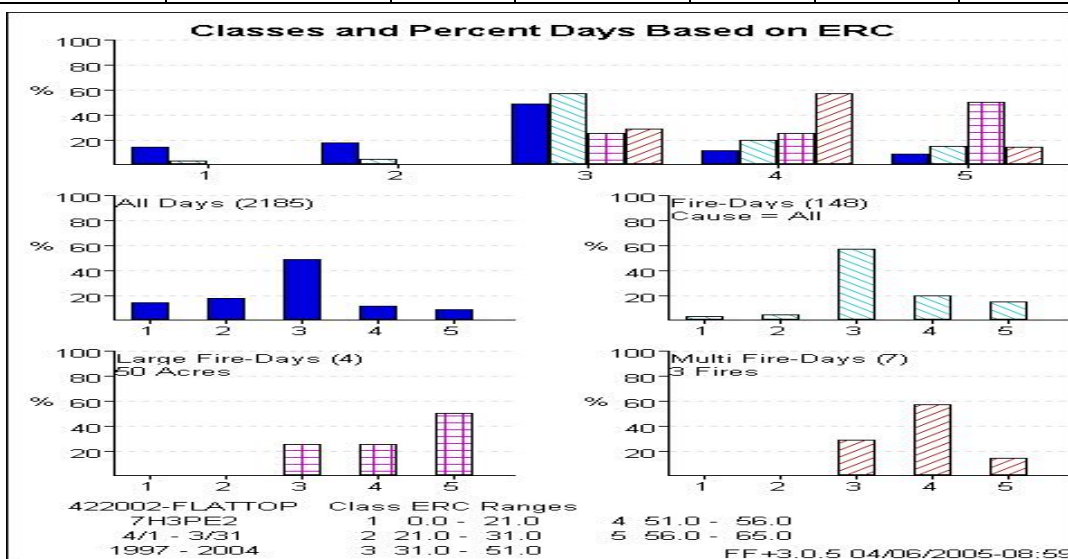


2. North Zone High Elevation Fire Danger Rating Area Fire Family Plus Analysis

Factors and Determinations

*APL = Agency Planning Level

| Rating Area | RAWS | Start Year | Weighting Factor | Fuel Model | Staffing Index | Fire Business Break point Ranges | |
|----------------|---------|------------|------------------|------------|----------------|----------------------------------|-------|
| High Elevation | Flattop | 1997 | 1 | H | ERC | APL 1 | 0-20 |
| | | | | | | APL 2 | 21-30 |
| | | | | | | APL 3 | 31-50 |
| | | | | | | APL 4 | 51-55 |
| | | | | | | APL 5 | 56+ |

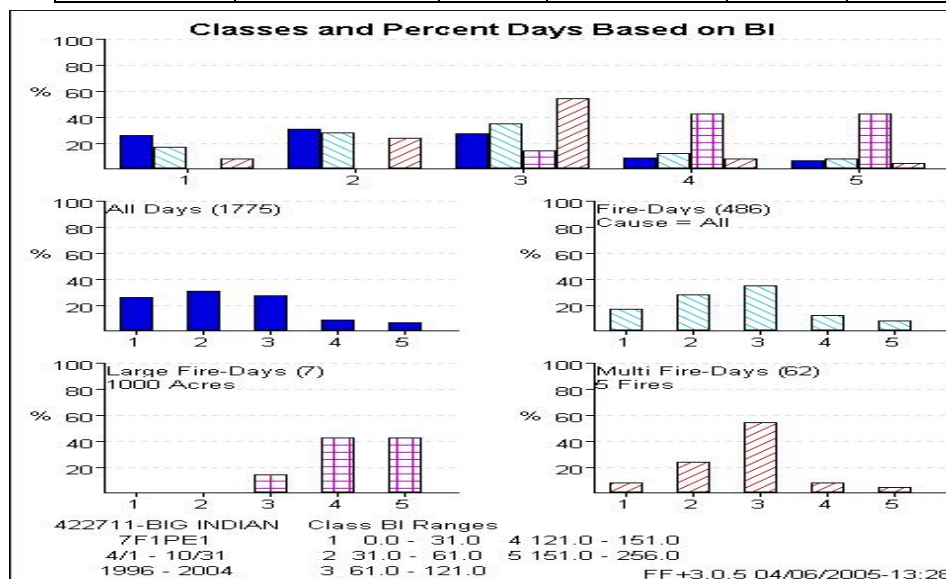


3. South Zone Low Elevation Fire Danger Rating Area Fire Family Plus Analysis

Factors and Determinations

*APL = Agency Planning Level

| Rating Area | RAWS | Start Year | Weighting Factor | Fuel Model | Staffing Index | Fire Business Break point Ranges | |
|---------------|------------|------------|------------------|------------|----------------|----------------------------------|---------|
| Low Elevation | Big Indian | 1996 | 1 | F | BI | APL 1 | 0-30 |
| | | | | | | APL 2 | 31-60 |
| | | | | | | APL 3 | 61-120 |
| | | | | | | APL 4 | 121-150 |
| | | | | | | APL 5 | 151+ |

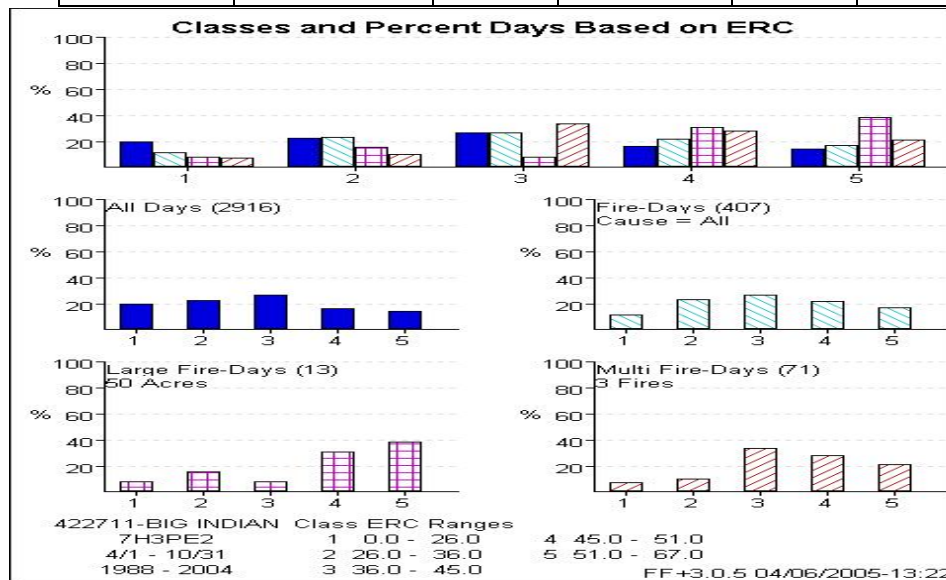


4. South Zone High Elevation Fire Danger Rating Area Fire Family Plus Analysis

Factors and Determinations

*APL = Agency Planning Level

| Rating Area | RAWS | Start Year | Weighting Factor | Fuel Model | Staffing Index | Fire Business Break point Ranges | |
|----------------|------------|------------|------------------|------------|----------------|----------------------------------|-------|
| High Elevation | Big Indian | 1988 | 1 | H | ERC | APL 1 | 0-25 |
| | | | | | | APL 2 | 26-35 |
| | | | | | | APL 3 | 36-44 |
| | | | | | | APL 4 | 45-50 |
| | | | | | | APL 5 | 51+ |



Planning Levels and Interagency Preparedness Level

A worksheet will be used to set daily levels. Dispatch Levels are determined for North Zone and South Zone by Low/High Elevation fire danger areas. Agency planning levels are separately determined for North Zone and South Zone by the low elevation and the high elevation fire danger areas. Agency planning levels are then combined in a flowchart for a final Interagency Preparedness level. The resultant agency planning levels will be broadcast in conjunction with the morning information report and documented on the daily resource status report. Adjective fire danger ratings will also be broadcast and documented in the same manner.

A. Agency Planning Level Worksheet Instructions

1. **Index Value:** Determine the index value for North Zone and South Zone (use BI for Low and ERC for High elevations) based on the weather station for each fire danger area. These indices are forecasted by the National Weather Service based on the previous days 1300 RAWs observations, which are entered into WIMS by MIFC personnel. The final index value is determined by averaging the low and high elevation 5 day average value for North and South Zones to eliminate “spiking” of the data.
2. **Action:** After the planning level is set, daily procedures are followed and suggested actions can be taken.

B. Dispatch Level Work Sheet Instructions

1. **Index Value:** Determine the index value (use BI for Low and ERC for High elevations) based on the weather station for each fire danger area. These indices are forecasted by the National Weather Service based on the previous days 1300 RAWs observations, which are entered into WIMS by MIFC personnel. Modifiers (listed below) are then added to determine the dispatch level for the day.
2. **Red Flag Warning:** If a Red Flag Warning is forecasted, increase the index value as indicated in the worksheet.
3. **Haines Index:** If the Haines index is forecasted to be a six, increase the index value as indicated in the worksheet
4. **Run Card:** Once the dispatch level of Low, Moderate, or High is determined, run cards from the Arcview system and/or Wildcad system are used to determine the response of suppression forces to an incident

C. Adjective Fire Danger Rating Break Points

1. AFDR Description

Adjective fire danger break points are based on staffing classes (divisions of fire danger) and a staffing index/component (BI or ERC).

There are five levels of adjective fire danger: low, moderate, high, very high, and extreme.

The resultant adjective fire danger information will be used by agency personnel to maintain the awareness of public and industrial entities. The amount of interaction will depend on the magnitude of the adjective fire danger.

2. AFDR Determination

The Fire Danger Rating will be determined as part of the Agency Planning Level calculations.

D. Planning Level Worksheets – North Zone Fire Danger Area

1. High Elevation Planning Level - 5 Day Average ERC for Fuel Model H - _____

| | | | | | |
|---|-------------|-----------------|--------------|------------------|----------------|
| Flattop RAWS #422002 5 Day Average ERC | 0-20 | 21-30 | 31-50 | 51-55 | 56+ |
| Agency Planning Level - FS | 1 | 2 | 3 | 4 | 5 |
| Adjective Rating | Low | Moderate | High | Very High | Extreme |

2. Low Elevation Planning Level - 5 Day Average BI for Fuel Model F - _____

| | | | | | |
|--|-------------|-----------------|---------------|------------------|----------------|
| Flattop RAWS #422002 5 Day Average BI | 0-30 | 31-60 | 61-120 | 121-150 | 151+ |
| Agency Planning Level - BLM, NPS, State | 1 | 2 | 3 | 4 | 5 |
| Adjective Rating | Low | Moderate | High | Very High | Extreme |

E. Planning Level Worksheets – South Zone Fire Danger Area

1. High Elevation Planning Level - 5 Day Average ERC for Fuel Model H - _____

| | | | | | |
|--|-------------|-----------------|--------------|------------------|----------------|
| Big Indian RAWS #422002 5 Day Average ERC | 0-25 | 26-35 | 36-43 | 44-50 | 51+ |
| Agency Planning Level - FS | 1 | 2 | 3 | 4 | 5 |
| Adjective Rating | Low | Moderate | High | Very High | Extreme |

2. Low Elevation Planning Level - 5 Day Average BI for Fuel Model F - _____

| | | | | | |
|---|-------------|-----------------|---------------|------------------|----------------|
| Big Indian RAWS #422002 5 Day Average BI | 0-30 | 31-60 | 61-120 | 121-150 | 151+ |
| Agency Planning Level BLM, NPS, State | 1 | 2 | 3 | 4 | 5 |
| Adjective Rating | Low | Moderate | High | Very High | Extreme |

F. North Zone Dispatch Level Worksheets

1. Dispatch Level Worksheet - High Elevation

A. Actual Daily ERC for Fuel Model H - _____

B. Red Flag warning - if one has been issued - add 10 points _____

C. Haines Index - if predicted to be a SIX - add 10 points _____

Final Index Value - _____

| | | | |
|-------------------------------|------|----------|------|
| Index Value High Elevation | 0-30 | 31-50 | 51+ |
| Dispatch Level | Low | Moderate | High |

2. Dispatch Level Worksheet - Low Elevation

A. Actual Daily BI for Fuel Model F - _____

B. Red Flag warning - if one has been issued - add 30 points _____

C. Haines Index - if predicted to be a SIX - add 30 points _____

Final Index Value - _____

| | | | |
|------------------------------|------|----------|------|
| Index Value Low Elevation | 0-60 | 61-120 | 121+ |
| Dispatch Level | Low | Moderate | High |

G. South Zone Dispatch Levels Worksheet

1. Dispatch Level Worksheet - High Elevation

A. Actual Daily ERC for Fuel Model H - _____

B. Red Flag warning - if one has been issued - add 10 points _____

C. Haines Index - if predicted to be a SIX - add 10 points _____

Final Index Value - _____

| | | | |
|-------------------------------|------|----------|------|
| Index Value High Elevation | 0-35 | 36-43 | 44+ |
| Dispatch Level | Low | Moderate | High |

2. Dispatch Level Worksheet - Low Elevation

A. Actual Daily BI for Fuel Model F - _____

B. Red Flag warning - if one has been issued - add 30 points _____

C. Haines Index - if predicted to be a SIX - add 30 points _____

Final Index Value - _____

| | | | |
|------------------------------|------|----------|------|
| Index Value Low Elevation | 0-60 | 61-120 | 121+ |
| Dispatch Level | Low | Moderate | High |

H. Agency Planning Level Worksheet - High Elevation Fire Danger Area

1. Agency Planning Level - Fuel Model H -

North Zone 5 Day Average ERC + South Zone 5 Day Average ERC divided by 2 = _____

| | | | | | |
|-------------------------------|------|----------|-------|-----------|---------|
| Average ERC High Elevation | 0-23 | 24-33 | 34-47 | 48-53 | 54+ |
| Agency Planning Level FS | 1 | 2 | 3 | 4 | 5 |
| Adjective Rating | Low | Moderate | High | Very High | Extreme |

Final Index Value - _____

I. Agency Planning Level Worksheet - Low Elevation Fire Danger Area

1. Agency Planning Level - Fuel Model F

North Zone 5 Day Average BI + South Zone 5 Day Average BI divided by 2 = _____

| | | | | | |
|--|------|----------|--------|-----------|---------|
| Average BI Low Elevation | 0-30 | 31-60 | 61-120 | 121-150 | 151+ |
| Agency Planning Level BLM, NPS, State | 1 | 2 | 3 | 4 | 5 |
| Adjective Rating | Low | Moderate | High | Very High | Extreme |

Final Index Value - _____

J. Agency Planning Level Procedures

Planning level actions are guidelines for agency personnel to refer to when planning level thresholds are reached. They are discretionary in nature. (AL=Agency Planning Level)

1. Agency Administrator

| Responsible Party | Suggested Action | AL 1 | AL 2 | AL 3 | AL 4 | AL 5 | Affected Entity |
|----------------------|---|------|------|------|------|------|---------------------------|
| Agency Administrator | Ensure office staff are notifying MIFC of their fire availability. | √ | √ | √ | √ | √ | Agency |
| | Ensure resource advisors are designated and available for fire assignments. | √ | √ | √ | √ | √ | Agency |
| | Evaluate work/rest needs of fire staff and crews. | √ | √ | √ | √ | √ | Agency |
| | Consider need for fire restriction or closures. | | | √ | √ | √ | Public Industry |
| | Provide appropriate political support to fire staffs regarding the implementation of planning level actions. | | | √ | √ | √ | Agency Public Industry |
| | If required, review severity requests submitted by the FMO. | | | | √ | √ | Agency |
| | Issue guidance to staff indicating severity of the season and increased need and availability for fire support personnel. | | | | √ | √ | Agency |
| | Evaluate need for a Fire and Aviation Safety Team (FAST). | | | | √ | √ | Agency |

2. Fire Management Officer

| Responsible Party | Suggested Action | AL 1 | AL 2 | AL 3 | AL 4 | AL 5 | Affected Entity |
|-------------------|--|------|------|------|------|------|---------------------------|
| FMO | If planning level is decreasing, consult with FCO/Duty Officer/ MIFC Manager and consider release of pre-positioned or detailed personnel. | √ | √ | √ | √ | √ | Agency |
| | Evaluate season severity data (BI and ERC trends for season, fuel loadings, live FM, drought indices, and long term forecasts). | √ | √ | √ | √ | √ | Agency |
| | Evaluate crew and staff work/rest requirements. | √ | √ | √ | √ | √ | Agency |
| | Brief agency administrator on burning conditions and fire activity. | | √ | √ | √ | √ | Agency |
| | Review geographical and national preparedness levels and evaluate need to suspend local prescribe fire activities. | | | √ | √ | √ | Agency |
| | Ensure Prevention Officer has initiated media contacts and public education contacts. | | | √ | √ | √ | Public Industry |
| | Ensure office staff are briefed on increasing fire activity. | | | √ | √ | √ | Agency |
| | Brief State/Regional FMO on increasing fire activity. | | | √ | √ | √ | Agency |
| | Consider fire severity request and pre-positioning of resources including: suppression resources, aerial support, aerial supervision, command positions, dispatch, logistical support, and prevention. | | | √ | √ | √ | Agency Public Industry |
| | Evaluate need for fire restrictions or closures. | | | √ | √ | √ | Public Industry |
| | Communicate with EGBCC Manager on geographical conditions and resource availability. | | | | √ | √ | Agency |
| | Request the Agency Administrator to issue guidance to office staff regarding the need for increased fire availability in support positions. | | | √ | √ | √ | Agency |
| | Consult with the State FMO and agency administrator regarding potential need to pre-position a Type 2 Team. | | | | | √ | Agency |

3. Duty Officer

| Responsible Party | Suggested Action | AL 1 | AL 2 | AL 3 | AL 4 | AL 5 | Affected Entity |
|-------------------|--|------|------|------|------|------|-----------------|
| Duty Officer | If planning level is decreasing, consider releasing pre-positioned and detailed resources. | √ | √ | √ | √ | √ | Agency |
| | Ensure incoming pre-position or detailed personnel are briefed on local conditions. | √ | √ | √ | √ | √ | Agency |
| | Evaluate work/rest needs of IA crews. | | √ | √ | √ | √ | Agency |
| | Consider aerial detection flight. | | | √ | √ | √ | Agency |
| | Evaluate need to change or shift duty hours of IA resources. | | | √ | √ | √ | Agency |
| | Consider suspending prescribed fire operations. | | | √ | √ | √ | Agency |
| | Consider extending staffing beyond normal shift length. | | | √ | √ | √ | Agency |
| | Brief FMO on severity of conditions and consider severity requests. | | | √ | √ | √ | Agency |
| | Consider pre-positioning and/or detailing of additional IA resources from off-unit. | | | √ | √ | √ | Agency |
| | Consider pre-positioning and automatic dispatch of ATGS aircraft. | | | | √ | √ | Agency |
| | Consider bringing in local IA resources from scheduled days off. | | | | √ | √ | Agency |
| | Consider patrols and pre-positioning of local IA resources in high risk areas. | | | | √ | √ | Agency |
| | Consider patrols in camping and recreation areas. | | | | √ | √ | Public |
| | Consider suspension of project work away from station. | | | | √ | √ | Agency |
| | Consider automatic dispatch of heavy air tankers for IA. | | | | | √ | Agency |

4. Resource Advisor

| Responsible Party | Suggested Action | AL 1 | AL 2 | AL 3 | AL 4 | AL 5 | Affected Entity |
|-------------------|---|------|------|------|------|------|-----------------|
| Resource Advisor | Acquire daily Planning Levels and Fire Danger levels. | √ | √ | √ | √ | √ | Agency |
| | Coordinate efforts with the Duty Officer and Incident Commanders. | | | √ | √ | √ | Agency |

5. Engine/Crew Leaders

| Responsible Party | Suggested Action | AL 1 | AL 2 | AL 3 | AL 4 | AL 5 | Affected Entity |
|--|--|------|------|------|------|------|-----------------|
| Engine Module Leaders/ Crew Leaders | Ensure IA crews are briefed on local preparedness level, burning conditions, and availability of IA resources and air support. | √ | √ | √ | √ | √ | Agency |
| | Evaluate work/rest needs of crew. Ensure days off are taken and request relief if needed. | √ | √ | √ | √ | √ | Agency |
| | Ensure that an adequate daily briefing is provided. | √ | √ | √ | √ | √ | Agency |
| | Ensure equipment and crew preparedness. | √ | √ | √ | √ | √ | Agency |
| | Provide Duty Officer feedback regarding crew fatigue. | √ | √ | √ | √ | √ | Agency |
| | Participate in prevention activities as required. | √ | √ | √ | √ | √ | Public Industry |
| | Perform required check-ins - including checking-in when moving locations during the day. | | √ | √ | √ | √ | Agency |
| | Provide duty officer with feedback regarding unique/unexpected fire behavior, severity conditions, and the need to increase IA capabilities. | | | √ | √ | √ | Agency |

6. Fire Prevention Officer

| Responsible Party | Suggested Action | AL 1 | AL 2 | AL 3 | AL 4 | AL 5 | Affected Entity |
|-------------------------|--|------|------|------|------|------|------------------------------|
| Fire Prevention Officer | Contact local media to make the public aware of the start of fire season and the potential for local fire danger to increase. | √ | √ | √ | √ | √ | Public Industry |
| | Provide public and industrial entities with access to fire danger information, closures, restrictions, and warnings. | √ | √ | √ | √ | √ | Public |
| | Ensure the public and industrial entities are aware of the policy of fire investigation and potential consequences related with the cost recovery process. | √ | √ | √ | √ | √ | Public Industry |
| | Consider need for increased prevention patrols. | | | √ | √ | √ | Agency |
| | Contact local industrial entities to make them aware of fire hazard and risk. | | | | √ | √ | Industry |
| | Contact local fire chiefs to make them aware of fire danger. | | | | √ | √ | Agency |
| | Consider door-to-door contacts in rural communities or ranch areas. | | | | √ | √ | Public Industry |
| | Post signs and warnings in camp and recreation areas. | | | | √ | √ | Public |
| | Notify local media of high/extreme fire danger and of the need for increased public caution. | | | | √ | √ | Public Industry |
| | Consult with FMO regarding severity requests and the potential need for additional prevention personnel or fire prevention team. | | | | √ | √ | Agency |
| | Consult with FMO regarding need for fire restrictions or closures. | | | √ | √ | √ | Agency Public Industry |

7. Law Enforcement Rangers

| Responsible Party | Suggested Action | AL 1 | AL 2 | AL 3 | AL 4 | AL 5 | Affected Entity |
|--------------------------|--|-------------|-------------|-------------|-------------|-------------|------------------------|
| Law Rangers | Check-in and notify dispatch of daily availability for fire assignments and location for day. | √ | √ | √ | √ | √ | Agency |
| | Consider increased patrol in high fire danger areas, such as campgrounds, OHV areas, shooting areas. | | | √ | √ | √ | Public |
| | Consider pre-positioning of or detailing in fire investigation personnel. | | | | √ | √ | Agency |
| | Consult with Fire Prevention Officer and FMO regarding need for fire restrictions or closures. | | | | √ | √ | Public Industry |

K. Moab Interagency Fire Zone Preparedness Level Worksheet Instructions

1. Add High Elevation and Low Elevation Agency Planning Levels together.
2. Large or Multiple Fire Activity: Although somewhat subjective, large or multiple fire activity can be defined as any fire or fires that require the commitment of a large percentage of available suppression resources. Place a checkmark in the appropriate box .
3. Determine final Interagency Preparedness level.

| | | | | | | | | | | | | |
|--|--|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|--|
| Combined Planning Level Total of both Fire Danger Zones | | 2-3 | | 4-5 | | 6-7 | | 8-9 | | 10 | | |
| √ | | | | | | | | | | | | |
| Large or Multiple Fire Activity | | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | |
| √ | | | | | | | | | | | | |
| Interagency Preparedness Level | | 1 | | 2 | | 3 | | 4 | | 5 | | |

Final Index Value - _____

L. Interagency Preparedness Level Actions/Procedures

1. MIFC Manager

| Responsible Party | Suggested Action | PL 1 | PL 2 | PL 3 | PL 4 | PL 5 |
|-------------------|---|------|------|------|------|------|
| MIFC Manager | Evaluate work/rest needs of center staff. | √ | √ | √ | √ | √ |
| | Input weather obs into WIMS. | √ | √ | √ | √ | √ |
| | If preparedness level is decreasing, consider release of pre-positioned or detailed dispatchers and logistical support personnel. | | √ | √ | √ | √ |
| | Begin tracking weekly availability of overhead personnel. | | √ | √ | √ | √ |
| | Establish weekly conference calls with FMOs and Operations staff. | | √ | √ | √ | √ |
| | Consult with Duty Officer concerning potential for extended staffing beyond normal shift length of IA staff. | | | √ | √ | √ |
| | Consider pre-positioning or detail of off-unit IA dispatchers and logistical support personnel. | | | √ | √ | √ |
| | Notify Local Procurement Team | | | | √ | √ |
| | Consider activation of local area MAC Group. | | | | √ | √ |
| | Consider ordering a Fire Behavior Analyst. | | | | √ | √ |
| | Consult with FMOs regarding need for severity request. | | | | √ | √ |
| | Consider bringing additional dispatch personnel in from scheduled days off. | | | | √ | √ |

2. Drawdown Levels - At the various preparedness levels, the following resources will be held within SE Utah.

Preparedness Level 1 - BLM - One Engine
FS - One Engine
State - Two Engines*

Preparedness Level 2 - BLM - Two Engines or One Engine/Helicopter
FS - One Engine, One Squad
State - Two Engines*

Preparedness Level 3 - BLM - Three Engines or Two Engines/Helicopter
FS - Two Engines, One Squad
State - Two Engines*

Preparedness Level 4 - All Resources excluding the Red Rock Crew

Preparedness Level 5 - All Resources including the Red Rock Crew

*At levels 1-3, a State engine may be able to leave the area. Check with State at time of request.

NPS units are restricted to home units only.